1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

372 possible to transfer fire from one cook house to another. It is a common sight in any village to see children and adults carrying fire from one cook house to another in order to start a fresh blaze.

To procure fire, one end of a coconut spathe (*tauma*) is placed in a burning fire until it ignites. As it is carried away, it is moved gently in the air to keep it flaming. To transfer fire from smouldering cinders or ashes another technique is used: a coconut spathe is held with the tip toward the body, and the butt end is folded back on itself about 12 inches from the end; a section of the spathe at the fold is shredded with the fingers; cinders or smouldering wood are picked up in the fold and carried back thus to the cook house, or else the cinders are blown upon and the shredded spathe ignited. This method is used regularly for starting fire with a match.

Ovens

343 252 372 Kitchens (*male imu*) are small houses set back from the dwelling houses. In the villages they are permanent structures, well built, of the *male wakoyamoa* type (p. 111). In the copra settlements they are smaller, of rougher build, and, in the main, of the *male toimuhu* style (p. 109). The kitchen shelters the oven (*imu*) which is situated at one end, often under a lean-to shelter, so that the prevailing winds blow the smoke away from the cooks.

The oven ground is excavated to form a sunken space about 4 feet square and 18 inches deep. The edges are lined with logs to prevent the sand from falling in. The bottom is filled with oven stones (*mutu imu*), blocks of coral conglomerate (*houtapa*), or, when available, imported volcanic stones (*hala*). Because the coral does not last long under heat and must be frequently renewed, *hala* stones are highly valued. *Tridacna* shells are not used as heating material.

To build the oven (*pa te imu*), coconut shells (*ngaipa*) are piled on the floor of the oven, dry coconut husks (*pihipihi*) are stood around them, and the oven stones are piled on and around the sides of the husks. The shells are lighted by a burning coconut sheath inserted under them. When the fuel has burned out (*hoa matemate te imu*), the hot stones are pushed aside (*tolo te imu*) with the butt of a coconut midrib (for this purpose called *tua*). Bits of burning wood and charcoal are thrown away. So as not to burn the food a few cold coral pebbles are sprinkled on the hot ground, and the floor of the oven is covered with *puapua* leaves (*lautaloa*). Food packets covered with leaves are placed on the *lautaloa*. The hot oven stones are piled on top of the food packets and covered with flat bundles of *puapua* leaves tied with coconut leaflet midribs. Green coconut husks are carefully arranged on top of the leaves so as to cover them entirely. The whole is covered again with several layers of *poipola* coconut-leaf mats arranged so there are no cracks through which heat may escape. Today old copra sacks form a convenient and valued substitute for *poipola*. The whole oven covering is termed *tuhua;* to cover the oven is *uui te imu* or *tui te tuhua*. Whenever a woman comes back from the taro beds, she places a bundle of *puapua* leaves on her head to serve as a pad to cushion the weight of the basket of taro and tucks more leaves into the top of the basket to keep the taro from falling out. The leaves thus brought back to the cook house are preserved for use as oven covers.

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Cooking

252 262 Cooking is done by women. On certain rare occasions a man may prepare food without disgrace: when in a group of men alone on the reserve

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

MATERIAL CULTURE

HOUSES

House Styles

341 797 343 A wide variety of house styles is found in Pukapuka today. In the permanent villages, the dwelling houses are either of coral lime roofed with pandanus thatch, or of a type introduced from Rarotonga by the missionaries, with slat walls reaching to the roof and often with a wide veranda. Along with these modern houses are found old style dwelling houses and cook houses. Small, square, slat-walled houses which stand close to each dwelling house in the permanent villages were evidently orginally built under missionary impetus to serve as bath houses. Some of these bath houses are used for their assumed purpose, but the majority, after their novelty wore off, were converted into storehouses for fishing gear. Loto village at one time set up a row of wooden structures on coral lime foundations in the water a few feet from the lagoon beach. These serve as privies; many of them are in sad need of repair.

In the copra villages, most dwelling and cook houses are built in an old Pukapukan style. One house in particular, a watch house at the place Matala in Uta, has acquired undue prominence in the literature because of its age. Built about three generations ago at the time of first missionary contact, it is a well-authenticated example of one style of Pukapukan house building.

SIMPLE RIDGEPOST HOUSE

341 336 The *wale tuinuku* (fig.8,*a*) is a small, low house, usually erected on exposed outer beaches to serve as a cook house, sometimes as a sleep house. The framework consists of two ridgeposts (*pou tu*), which support a single ridgepole (*tau matua*). In one subtype, rafters (*auti poto*) run from the ridgepole to the ground. In the other subtype, two wall posts (*pou*) on each side support wall plates (*kaukau matua*). Rafters run down from the ridgepole to rest on the wall plates. There are no thatch rafters; the thatch of coconut roof sheets is laid directly against the rafters, in such a manner that the midrib bases of the roof sheets function as thatch purlins. Lashings are of sennit or, as in a rough house examined, of dried *puloka* stalks. Smaller houses of this type have one ridgepole only, but more substantial houses have a second ridgepole (*tau lua*), which is laid in the crossings of the rafters (fig.8,*a*). The ridgepole roof sheet is securely fastened to the framework by pegs (*yuki*) that are pushed through the sheets and between the two ridgepoles.

A roof extension (*tauwata*) is often added to the exposed end of these

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

House Platform

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Most dwelling houses and a few cook houses are built on a platform of coral rubble (*purpu*), several feet larger than the ground area of the house. The rubble is contained by a curbing of coral stones 8 to 10 inches high. Some houses are built on a secondary or upper platform of rubble limited by a coral or log curbing, which forms the house floor and extends about 12 inches beyond the walls of the house. Most houses in the copra settlements are built on a single low platform, gravel inside the house being retained by log curbings.

Variations on Type House

Variations on the type house are found in the copra settlements.

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One house on the back beach of Uh conforms in all particulars to the *waheyamea* style, save that the ridgepole is supported by two ridgeposts, which stand on the inner side of the end tieberams. This house combines features from the *waheyamea* type and the *uale aiua* type. Most houses on exposed beaches are permanently covered on three sides with *takapea* mats or *pola* roof sheets fastened to wall poles. Only the leeward side of the house is left open between the ground and low eaves. In exposed situations, cook houses and dwelling houses of the *waheyamea* type are provided with roof extensions (*tamoeta*) to cover ovens or to provide a roomy wind break. The rafters on the exposed side of the house are extended to about 18 inches or 2 feet from the ground and supported on subsidiary wall posts and a subsidiary wall plate. The extension is thatched, and permanent *takapea* mats are fastened to the outside of the subsidiary wall posts.

A small typical *waheyamea* house, used as a sleep house in Yato village, measured 13 feet 8 inches long, 11 feet 7 inches wide; the eaves were 4 feet 6 inches from the ground; and the ridgepole was 9 feet 7 inches from the ground.

Storage Houses

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Houses of the *waheyamea* type used as storage houses (*uale tahetahe*) for nuts, fishing gear, or old canoe sections are often built far enough from the village to be safe from fire, but near enough to be easily visited. The floor of a *uale tahetahe* is used either as a place for lumber storage, or as a workshop for craft activities. According to the number of nut trees a man owns and the number of nuts he has to store, he possesses one or more *uale tahetahe*. Four houses was the usual number for an average family in former times, before copra was made.

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Storage Platform

Nuts at the *tahetahe* stage are stored on a platform laid on the tieberams and occupying the whole area marked out by the tieberams. The lengths of wood forming the platform and the rafters are laid very close together to prevent the intrusion of rodents. Legitimate entry to the platform is made through one or two gates or hatch-

1:Beaglehole and Beaglehole E-5 (1934-5)1938 Pukapukans

ways built into the center of the platform. Formerly the bottom hatch (*pa lao*) was level with the platform and lashed to it by complicated knots supposed to be known only to the owner of the house. When in use, the fastenings were untied and the hatch placed on the ground. The top hatch (*pa tai*), about 12 inches directly over the first hatch, was lashed horizontally to the top ends of thin vertical poles, which were lashed at the bottom to the platform supports. The two hatches and the vertical supporting poles thus formed a sort of box resting on the platform. On visiting his *wale takotako*, the owner took with him a block of wood which he placed on the ground under the hatch. He mounted this block to unfasten the first hatch, inside of which he usually kept a length of rope. One end of this he fastened to the platform and then, by the help of the hanging rope, scrambled up to open the second hatch. On leaving, he securely fastened the hatches, retied the knots, placed his piece of rope on the platform, and carried off his block of wood. After white contact a short ladder, something like a truncated grocer's ladder, came into general use to reach the platform hatches. This was called *tala*, a name probably derived from the word "steel". It was kept in the owner's sleep house when not otherwise needed. I saw no *wale takotako* house with two hatches in the storage platform. The above description is based on informant's account of old time practice. Many houses today, however, have the single hatch, which as often as not is fastened with hinges and padlock to the platform.

RIDGEPOLE, WALL PLATE HOUSE

The type *wale atua* house is a bilateral wall plate house with two or more ridgeposts supporting the ridgepole (fig. 11). The type house was used in former days principally as a god house (*wale atua*), but the massive construction style made the same type of house ideal for a meeting or watch house. Smaller houses of this type were occasionally used as sleep houses. There are available for study today the watch house at Matala, erected 75 years ago (described as type), a sleep house on the outer beach of Uta, and a model *wale atua* house (C8086)[1]. Brief mention of certain features of the framework of the watch house has already been made by Macgregor (20,p.43).

The watch house was originally constructed with six wall posts. A seventh post has been added at a later date to give added strength. The wall posts of *puapua* wood are sunk about an arm's length in the ground. Each post is round in cross section, save at the top where it is adzed roughly rectangular. The top of each post is grooved to receive the wall plates of pandanus wood, which are laid in the grooves, unlashed (fig.11). Five tiebeams are placed transversely across the wall plates, one tiebeam at each end, and the other three equi-spaced along the length of the house. The end of each tiebeam is grooved to fit securely over the wall plate to which it is lashed. The ends of the tiebeams are flush with the wall plates. Two ridgeposts of *puapua* wood, buried in the ground at one end and grooved at the other end, support the main ridgepole of pandanus wood which rests in the grooves and is unlashed. Each ridgepost rises from the ground on the inner side of the second tiebeam from each end; about 2 inches separate ridgepost and tiebeam. Running between wall plate and ridgepole on either side of the house are six principal rafters of pandanus wood. Each rafter is round in cross section but is grooved at each end to fit against ridgepole and wall plate, to which it is lashed. Each rafter at its lower end projects about 9 inches beyond the wall plate. The under surface at the end of the rafter is flattened that the square surface of the eave purlin may fit more closely to it before lashing (fig.11*c*).

[1] Unless otherwise stated, all collection numbers refer to specimens in Bernice P. Bishop Museum.

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PLATE 3.—House in Te Motu, used by watchmen in ancient times to guard over taro patches. One original corner post and one side post have been reenforced by new posts.

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PLATE 4.—Wrestler's malo.